

Amendment to the claims

1. (Original) An isolated polynucleotide encoding an MKK1 protein.

C1 2. (Currently amended) The isolated polynucleotide of claim ~~Claim~~ 1 having the nucleotide sequence depicted in ~~of~~ SEQ ID NO. 1.

3.-6. (Cancel)

7. (Original) A recombinant DNA vector containing a polynucleotide sequence that encodes an MKK1 protein.

8.-9. (Cancel)

C2 10. (Currently amended) An engineered host cell that contains the recombinant DNA vector of claim ~~Claims~~ 7, 8, or 9.

11.-25. (Withdrawn)

26. (Currently amended) A method for producing recombinant MKK1 comprising:

C3 (a) culturing a host cell transformed with the recombinant DNA expression vector of claim ~~Claim~~ 7 and which expresses MKK1; and

(b) recovering the MKK1 gene product from the cell culture.

27.-28. (Cancel)

29.-30. (Withdrawn)


31. (New) The isolated polynucleotide of claim 1, wherein the isolated polynucleotide encodes an MKK1 protein having the amino acid sequence depicted in SEQ ID NO. 2, or the full length complement of a polynucleotide encoding said MKK1 protein.

C4 32. (New) The recombinant DNA vector of claim 7, wherein the

polynucleotide encodes an MKK1 protein having the amino acid sequence depicted in SEQ ID NO. 2, or the full length complement of a polynucleotide encoding said MKK1 protein.

33. (New). An isolated polynucleotide that hybridizes to the polynucleotide of claim 1 under stringent conditions, wherein the isolated polynucleotide or its complement encodes a naturally occurring MKK1 protein, wherein said stringent conditions are selected from the group consisting of:

(a) 0.15 M NaCl/0.0015 M sodium citrate/0.1% SDS at 50.degree. C. for washing;

 (b) 50% (vol/vol) formamide with 0.1% bovine serum albumin/0.1% Ficoll/0.1% polyvinylpyrrolidone/50 mM sodium phosphate buffer at pH 6.5 with 750 mM NaCl and 75 mM sodium citrate at 42.degree. C. during hybridization; or

(c) hybridization in 50% formamide, 5.times.SSC, 5.times.Denhardt's solution, 50 g/ml sonicated salmon sperm DNA, 0.1% SDS, and 10% dextran sulfate at 42.degree., with washes at 42.degree. in 0.2.times.SSC and 0.1% SDS.

34. (New) The method of claim 33, wherein the isolated polynucleotide or its complement encodes an MKK1 protein having the amino acid sequence depicted in SEQ ID NO. 2.

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